

WHAT IS CLAIMED:

- 1           1.       A method of inhibiting growth of a tumor cell, which method comprises  
2       inhibiting transcriptional activity of ATF2.
- 1           2.       The method of claim 1, wherein inhibiting the transcriptional activity of ATF2  
2       comprises introducing a polypeptide comprising an N-terminal antagonist fragment of ATF2 into  
3       the tumor cell.
- 1           3.       The method of claim 2, wherein the N-terminal fragment of ATF2 comprises  
2       amino acid residues from about residue 50 of ATF2 to about 100 of ATF2.
- 1           4.       The method of claim 3, wherein the N-terminal fragment of ATF2 comprises  
2       amino acid residues from about residue 50 of ATF2 to about 100 of ATF2.
- 1           5.       The method of claim 2, wherein the introducing the polypeptide comprising an  
2       N-terminal antagonist fragment of ATF2 into the tumor cell comprises introducing an expression  
3       vector encoding the polypeptide into the tumor cell under conditions that permit expression of  
4       the polypeptide from the vector.
- 1           6.       The method of claim 5, wherein N-terminal fragment of ATF2 comprises  
2       about a 30 amino acid fragment of ATF2 comprising from about amino acid residue 45 to about  
3       amino acid residue 100.
- 1           7.       The method of claim 5, wherein the N-terminal fragment of ATF2 comprises  
2       about a 50 amino acid fragment of ATF2 comprising from about amino acid residue 50 to about  
3       amino acid residue 100.
- 1           8.       The method of claim 1 wherein the tumor cell is a melanoma tumor cell.

- 2                    9.        The method of claim 1, wherein the tumor cell is a breast cancer tumor cell.
- 1                    10.      The method of claim 1, further comprising treating the tumor cell with a  
2        chemotherapeutic agent.
- 1                    11.      The method of claim 10, wherein the chemotherapeutic agent is selected from  
2        the group consisting of a p38 inhibitor, UCN-01, NCS, anisomycin, LY294002, PD98059,  
3        AG490, and SB203580.
- 1                    12.      The method of claim 1, further comprising treating the tumor cell with  
2        radiation.
- 1                    13.      A polypeptide comprising an inhibitory ATF2 N-terminal fragment.
- 1                    14.      The polypeptide of claim 13, wherein the fragment has a sequence consisting  
2        of from about amino acid residue 50 to about amino acid residue 100 of ATF2.
- 1                    15.      The polypeptide of claim 13, further comprising a translocation peptide  
2        sequence.
- 1                    16.      A nucleic acid encoding a polypeptide comprising an inhibitory ATF2 N-  
2        terminal fragment, which N-terminal fragment comprises a sequence from about amino acid  
3        residue 50 to about amino acid residue 75 of ATF2.
- 1                    17.      The nucleic acid of claim 16 encoding a polypeptide wherein the N-terminal  
2        fragment comprises from about amino acid residue 45 to about amino acid residue 100 of ATF2.
- 1                    18.      An expression vector comprising the nucleic acid of claim 16 operably  
2        associated with an expression control sequence.

1 19. The expression vector of claim 18, wherein the expression control sequence  
2 provides for expression in a tumor cell.

1 20. A pharmaceutical composition comprising the polypeptide of claim 13 and a  
2 pharmaceutically acceptable carrier or excipient.

1 21. A pharmaceutical composition comprising the polypeptide of claim 15 and a  
2 pharmaceutically acceptable carrier or excipient.

1 22. A pharmaceutical composition comprising the expression vector of claim 18  
2 and a pharmaceutically acceptable carrier or excipient.

1 23. A method of treating a tumor in a subject, which method comprises  
2 administering therapeutically effective amount of the pharmaceutical composition of claim 20,  
3 21, or 22 to the subject.

1 24. The method of claim 23 wherein the tumor is a melanoma tumor.

1 25. The method of claim 23, wherein the tumor is a breast cancer tumor.

1 26. The method of claim 23, further comprising treating the tumor with a  
2 chemotherapeutic agent.

1 27. The method of claim 26, wherein the chemotherapeutic agent is a p38  
2 inhibitor.

1 28. The method of claim 26, wherein the chemotherapeutic agent is selected from  
2 the group consisting of UCN-01, NCS, anisomycin, LY294002, PD98059, AG490, and

3 SB203580.

1 29. The method of claim 23, further comprising treating the tumor with radiation.

1 30. A method for identifying a compound that modulates ATF2 activity, which  
2 method comprises determining the level of expression of a reporter gene in a cell comprising the  
3 reporter gene operatively associated with an ATF2-regulated expression control sequence  
4 contacted with a compound under conditions in which ATF2 would induce expression of the  
5 reporter gene in the absence of the compound, and comparing the level of expression of the  
6 reporter gene in the presence of the compound to the level of expression in the absence of the  
7 compound, wherein a difference in the level of expression of the reporter gene indicates that the  
8 compound modulates ATF2 activity.

1 31. The method of claim 30, wherein the level of reporter gene expression in the  
2 presence of the compound is less than in the absence of the compound, wherein the compound  
3 inhibits ATF2 activity.

1 32. The method according to claim 31, wherein the compound is a polypeptide.